

Futoshi MIYAMOTO*: *Gymnocarpium* \times *bipinnatifidum*,
a new hybrid fern from Japan

宮本 太*: 日本産ウサギンダ属の新雑種

An interesting *Gymnocarpium* was recently found by Mr. Kazuo Suzuki in Mt. Toyoguchi area, Nagano Prefecture, central Honshu, Japan. The fern intermingled with *G. oyamense* (Baker) Ching and *G. robertianum* (Hoffm.) Newmann on the limestone slope is regarded as the natural hybrid between them. According to Sarvela (1978), the putative parents belong to the different subgenera of the genus. That is, *G. robertianum* is classified in the subgenus *Gymnocarpium* characterized by bi- or tri-pinnate lamina while *G. oyamense* is put in the monotypic *Curranina* with simply pinnatifid lamina. This is the first natural hybrid between these two subgenera, though more than three interspecific hybrids have been reported in the genus. This paper presents the distinguishing features of the new hybrid, *G. \times bipinnatifidum* (nov.), and its putative parents.

From *G. oyamense* this hybrid is distinguished by the bipinnate lamina with apparently independent lower pinnae, and the stipe jointed with the lamina at an angle of 90° to 120°. The hybrid differs from *G. robertianum* by the lamina with numerous sessile pinnae arranged densely, and hardly incised lobes.

***Gymnocarpium* \times *bipinnatifidum* Miyamoto, hybr. nov. (Fig. 1)**

G. oyamense (Baker) Ching \times *G. robertianum* (Hoffm.) Newmann

Ab anteriore fronde bipinnata, infernae laminae pinnis distinctis, lamina stipite ad angulum 90°–120° (non 50°–80° nec 140°–165°) articulata; ab posteriore fronde pinnis congestioribus, sessilibus, pinnulis aegre incis, bene differt.

Rhizoma longe repens, ca. 2 mm squamis sparsis testaceis membranaceis lanceolatis, margine integris. Frondes in apice rhizomatis dispositae. Stipes 5–22 cm longus, gracilis, stramineo-viridis vel pallido-viridis, basi squamis caducis, 3–5 mm longis 1–1.5 mm latis, testaceis membranaceis lanceolatis vel lineari-lanceolatis, margine integris vestitus. Lamina tenuiter herbacea, valde late triang-

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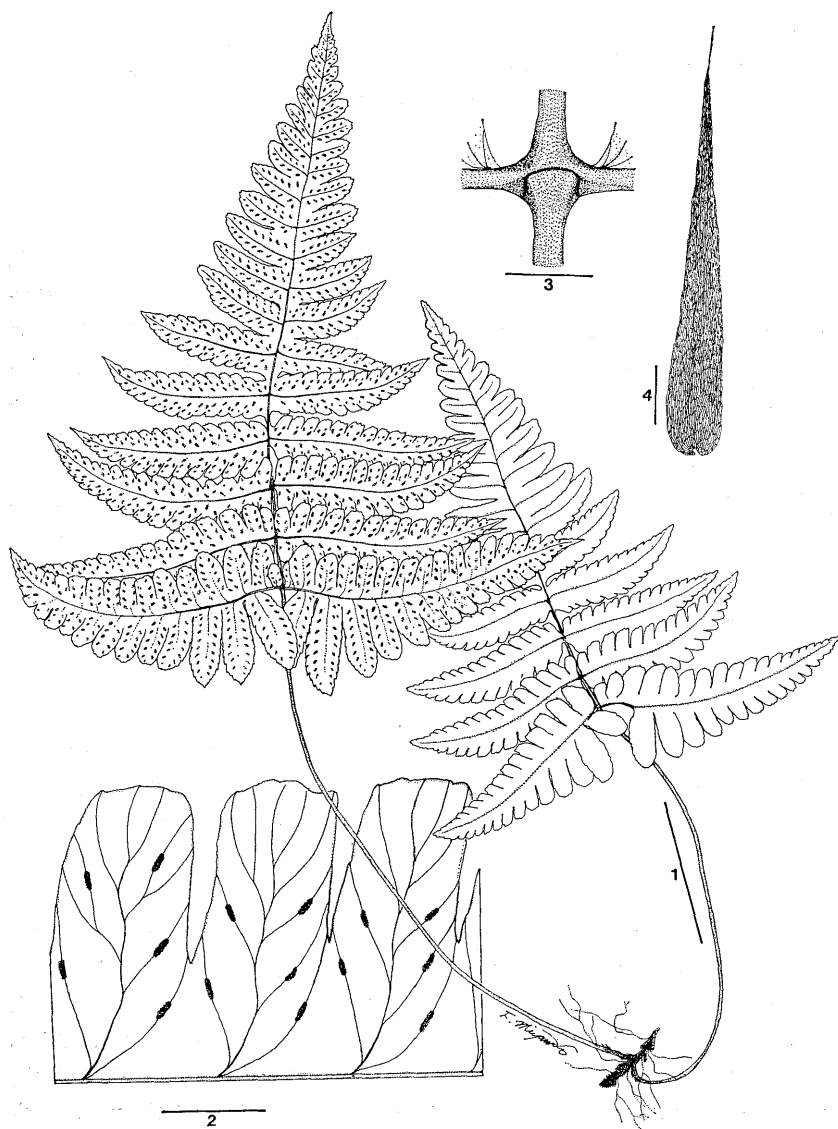


Fig. 1. *Gymnocarpium* \times *bipinnatifidum* Miyamoto (holotype). 1. Frond (bar, 5 cm). 2. Part of pinna (bar, 5 mm). 3. Articulate of lamina jointed with stipe (bar, 2 mm). 4. Scale at the base of stipe (bar, 1 mm).

ularis vel triangularis, bipinnatifida vel bipinnatisecta, 10-18 cm longa 10-19 cm lata, acuta, prope basin stipite ad angulum 90°-120° (*G. oyamense* 50°-80°, *G. robertianum* 140°-165°) articulata. Rachis stramineo-viridis vel pallido-viridis, fere glabrata. Pinae 10-18 jugae, 2-10 cm longae 1-5 cm latae, lanceolatae vel oblongo-lanceolatae, acutae, horizontaliter sprendentes; infernis pinnis margine fissis vel sectis, sessilibus (sed 2 jugis ± distinctis), lobis obtusis margine densiusculis; superis pinnis crenatis. Venulis simplicibus vel furcatis, marginem attingentibus. Sori utrinque ad costulam 2 vel raro 4 seriati, elliptici, 1-1.5 mm longi, mediani, exindusiati. Sporae abortivae.

Hab. Honshu: The upper reaches the Siokawa river, the foot of Mt. Toyoguchi, Ôshika-mura, Kami-ina-gun, Nagano Pref. (Kazuo Suzuki on Aug. 2, 1985, holotype in Herb. Tokyo Univ. of Agricult. TUAT-82617, isotype TNS).

Nom. Jap. Ô-ebira-shida (nom. nov.)

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Reference

Sarvela, J. (1978). A synopsis of the fern genus *Gymnocarpium*. Ann. Bot. Fennici 15: 101-106.

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ウサギンダ属にはこれまで3つの種間雑種が報告されている。(Sarvela 1978)。今回、鈴木和生氏によって南アルプス山麓で採集されたエビランダとイワウサギンダの雑種(オオエビランダ, 新称)を報告する。これは同属中の2亜属間(エビランダ亜属ならびにウサギンダ亜属)に見い出された最初の雑種であり、この雑種の発見は、従来独立属として扱われることもあったエビランダがウサギンダ属の種との近縁性を示す証拠ともなると考えられる。